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10/821,567	04/09/2004	Ronald C. Gamble	135-US	1280

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EXAMINER

LARKIN, DANIEL SEAN

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/821,567

Applicant(s)

GAMBLE ET AL.

Examiner

Daniel S. Larkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-20 and 22-35 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53-60, 62, and 63 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 21, 36-52, 61 and 64 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II in the reply filed on 13 March 2006 is acknowledged. The traversal is on the ground(s) that the claim groupings are not independent from one another and that the search for eleven additional claims would not be a burden since Groups I and II are directed to the same class and subclass. This is not found persuasive because while the subject matter of Groups I and II may be classified in the same class and subclass, each grouping contains claim limitations found in one group that is not found in the other grouping. This two-way distinctness creates the restriction require, such that looking for one concept while focusing on a separate concept would create a burden for the examiner. As to the argument that searching for eleven claims does not create a burden for the examiner is respectfully untrue. Through this restriction, the examiner is already searching thirty claims and multiple combinations, and now Applicant suggests eleven additional claims would not create a burden. When searching the examiner is formulating a search while trying to keep all of the concepts provided for in the claims in the search strategy, such that an entirely new concepts that distinct from the search strategy being formulated would create a burden for the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-20 and 22-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable

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generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 13 March 2006.

Drawings

3. The drawings are objected to because of the following:

The letter designations "a", "b", and "n" after the reference numerals shown in Figure should be capitalized to maintain consistency with the description first provided in the specification, page 5, paragraph [0013], lines 7-8.

The lead line representative of reference numeral "124A", as shown in the fourth layer 114 of Figure 4A, appears to be pointing to the alignment hole 121; otherwise it doesn't appear that the alignment hole 121 appears within the fourth layer 114.

Reference numeral "825A", as shown in the seventh layer 817 of Figure 18C, appears twice.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

Reference numeral "500", as shown in Figure 13, does not appear within the specification.

Reference numerals "128D" and "128F", as shown in the first layer 111 of Figure 13, does not expressly appear within the specification.

Reference numeral "134X", as shown in the second layer 112 of Figure 13, does not appear within the specification.

Reference numeral "156B", as shown in the seventh layer 117 of Figure 13, does not appear within the specification.

Reference numeral "450X", as shown in Figure 5, does not appear within the specification.

Reference numerals "482A" and "482X", as shown in Figure 5 and in the twelfth layer 422 of Figure 6D, do not appear within the specification.

Reference numeral "400A", as shown in Figures 6A and 6E, does not appear within the specification.

Reference numeral "400B", as shown in Figures 6B and 6E, does not appear within the specification.

Reference numerals "455A" and "455X", as shown in the fifth layer 115 of Figure 6B, do not appear within the specification.

Reference numeral "446C", as shown in the sixth layer 116 of Figure 6B, does not expressly appear within the specification.

Reference numeral "400C", as shown in Figures 6C and 6E, does not appear within the specification.

Reference numeral "400D", as shown in Figures 6D and 6E, does not appear within the specification.

Reference numeral "471B", as shown in the tenth layer 420 of Figure 6D, does not appear within the specification

Reference numerals "481A" and "481X", as shown in the tenth layer 420 of Figure 6D, do not appear within the specification.

Reference numeral "550", as shown in Figure 14, does not appear within the specification.

Reference numerals "604" and "628", as shown in Figure 17, do not appear within the specification.

Reference numeral "860B", as shown in the sixth layer 816 of Figure 18B, does not appear within the specification.

Reference numeral "892", as shown in the fourth layer 814 of Figure 18A, does not appear within the specification relating to Figure 18A or the fourth layer 814.

Reference numeral "810A", as shown in Figures 18A and 18D, does not appear within the specification

Reference numeral "810B", as shown in Figures 18B and 18D, does not appear within the specification

Reference numeral "810C", as shown in Figures 18C and 18D, does not appear within the specification.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference numeral -- 128X -- does not appear within Figure 4A as suggested by the disclosure on page 22, paragraph [0097], line 3 and page 23, paragraph [0099], line 13.

Reference numeral -- 128X -- does not appear within Figures 4A or 4B as

suggested by the disclosure on page 22, paragraph [0097], line 3 and page 23, paragraph [0099], line 13.

Reference numeral -- 134N -- does not appear within Figures 4A or 4B as suggested by the disclosure on page 23, paragraph [0099], line 12.

Reference numerals -- 168A-168B -- do not appear within Figures 4A or 4B as suggested by the disclosure on page 24, paragraph [00102], line 12.

Reference numeral -- 154A -- does not appear within Figures 4A or 4B as suggested by the disclosure on page 24, paragraph [00102], line 13.

Reference numeral -- 825B -- does not appear within the seventh layer 817 of Figure 18C as suggested by the disclosure on page 40, paragraph [00144], line 9.

Reference numeral -- 860N -- does not appear within the sixth layer 816 of Figure 18B as suggested by the disclosure on page 41, paragraph [00145], line 31.

Reference numeral -- 859A -- does not appear within drawing figures as suggested by the disclosure on page 42, paragraph [00146], line 13.

Reference numerals --823A-823B --, -- 836A-836B --, -- 882 --, --826A --, -- 826B --, -- 828A-828N --, and -- 830A-830N -- do not appear within Figure 18F as suggested by the disclosure on page 42, paragraph [00148], lines 2-4.

Reference numerals --891--, -- 892 --, -- 893A --, -- 893B --, --894A-894N --, -- 895A-895N --, -- 896A-896N --, and -- 897A-897N -- do not appear within Figure 18G as suggested by the disclosure on page 43, paragraph [00148], lines 2-5.

6. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

8. The disclosure is objected to because of the following informalities:

Page 1, paragraph [0004], lines 2 and 10: A -- comma -- should be inserted prior to the term "such".

Page 5, paragraph [0013], line 13: The article -- a -- should be inserted prior to the term "waste".

Page 7, paragraph [0019], line 5: A -- comma -- should be inserted prior to the term "such".

Page 13, paragraph [0069], line 7: A -- comma -- should be inserted prior to the term "such".

Page 14, paragraph [0071], line 11: A -- comma -- should be inserted prior to the term "such".

Page 14, paragraph [0071], line 14: A -- comma -- should be inserted after the term "systems".

Page 14, paragraph [0073], line 8: A -- comma -- should be inserted prior to the term "such" and after the term "membrane".

Page 15, paragraph [0073], line 6: A -- comma -- should be inserted prior to the term "such".

Page 15, paragraph [0073], line 7: A -- comma -- should be inserted after the term "acetonitrile".

Page 16, paragraph [0075], line 12: The first letter of the terms "patent", "publication", and "no." should be capitalized.

Page 17, paragraph [0078], lines 11 and 12: The first letter of the terms "patent", "publication", and "no." should be capitalized.

Page 22, paragraph [0095], line 7: A -- comma -- should be inserted prior to the term "such".

Page 23, paragraph [0098], line 6: A -- comma -- should be inserted prior to the term "such".

Page 23, paragraph [0099], line 11: The first occurrence of the article "the" should be corrected to read -- a manifold --.

Page 23, paragraph [0099], line 12: Reference numeral "134N" should be corrected to read -- 134X --.

Page 23, paragraph [00100], line 3: The article "a" should be corrected to read -- the --.

Page 23, paragraph [00100], line 5: Reference numeral "145" should be corrected to read -- 145A-145X --.

Page 24, paragraph [00100], line 2: Reference numeral "145" should be corrected to read -- 145A-145X --.

Page 24, paragraph [00101], line 2: The term "layers" should be corrected to read -- layer --.

Page 24, paragraph [00101], line 6: A -- comma -- should be inserted prior to the term "such".

Page 24, paragraph [00101], line 10: The first letter of the terms "application", "serial", and "no." should be capitalized; and the "parentheses" should be deleted.

Page 24, paragraph [00101], line 10: The phrase -- , now U.S. Patent No. 6,936,167 -- should be inserted after the date "2002".

Page 24, paragraph [00102], line 2: The term "vias" should be corrected to read -- via --.

Page 24, paragraph [00102], line 6: Reference numeral "145" should be corrected to read -- 145A-145X --.

Page 25, paragraph [00102], line 1: Reference numeral "145" should be corrected to read -- 145A-145X --.

Page 25, paragraph [00104], line 8: The first letter of the terms "patent", "publication", and "no." should be capitalized.

Page 25, paragraph [00105], line 3: The first letter of the terms "patent", "application", "serial", and "no." should be capitalized.

Page 25, paragraph [00105], line 4: The phrase -- , now U.S. Patent No. 6,936,167 -- should be inserted after the date "2003".

Page 26, paragraph [00106], line 4: A -- comma -- should be inserted prior to the term "such".

Page 26, paragraph [00106], line 5: A -- comma -- should be inserted after the term "shown".

Page 26, paragraph [00107], line 17: A -- comma -- should be inserted prior to the term "such".

Page 27, paragraph [00110], line 2: A -- comma -- should be inserted prior to the term "such".

Page 27, paragraph [00110], line 12: A -- comma -- should be inserted prior to the term "such"; and after the term "herein".

Page 28, paragraph [00111], line 18: A -- comma -- should be inserted prior to the term "such".

Page 29, paragraph [00112], line 2: A -- comma -- should be inserted after the term "embodiment".

Page 29, paragraph [00113], line 8: The phrase "460A-460B defined in the fifth and the sixth layers 415, 416" should be corrected because slit 460A is not in the fifth layer 415 as suggested by the phrase. The sixth layer 416 contains reference numeral 460A, and the fifth layer 415 contains reference numeral 460B.

Page 30, paragraph [00115], lines 3 and 7: Two numerals "485" and "486" have been used to designate the waste port. Which is correct?

Page 33, paragraph [00121], line 3: A -- comma -- should be inserted prior to the term "such".

Page 33, paragraph [00123], line 3: A -- comma -- should be inserted prior to the term "such".

Page 33, paragraph [00124], line 8: The first letter of the terms "application" and "no." should be capitalized.

Page 33, paragraph [00124], line 9: The phrase -- , now U.S. Patent No. 6,867,857, -- should be inserted after the date "2002".

Page 34, paragraph [00128], line 3: A -- comma -- should be inserted prior to the term "such".

Page 34, paragraph [00128], line 4: A -- comma -- should be inserted after the term "components"; and the numeral "24-" should be corrected to read -- twenty-four --.

Page 34, paragraph [00128], line 5: A -- comma -- should be inserted prior to the term "such".

Page 34, paragraph [00128], line 10: The numeral "24" should be corrected to read -- twenty-four --.

Page 35, paragraph [00129], line 8: A -- comma -- should be inserted prior to the term "but".

Page 37, paragraph [00135], line 1: The term "On" should be corrected to read -- One --.

Page 37, paragraph [00135], line 9: A -- comma -- should be inserted after the term "Thereafter".

Page 37, paragraph [00135], lines 21 and 22: The designations "FIG. 16A" and "FIG.16B" should each be bold printed to maintain consistency with the other figure designations.

Page 37, paragraph [00136], line 4: The second occurrence of the numeral "601" should be corrected to read -- 602 --.

Page 37, paragraph [00136], line 4: Reference numeral -- 604 -- should be inserted after the term "degasser".

Page 38, paragraph [00136], line 2: Reference numeral -- 605 -- should be inserted after the term "pump(s)".

Page 38, paragraph [00137], line 3: A -- comma -- should be inserted prior to the term "such".

Page 38, paragraph [00137], line 10: The first letter of the terms "application" and "no." should be capitalized.

Page 38, paragraph [00137], line 10: The phrase -- , now U.S. Patent No. 6,867,857 -- should be inserted after the date "2002".

Page 38, paragraph [00138], line 10: Reference numeral -- 628 -- should be inserted after the term "display".

Page 39, paragraph [00143], line 2: A -- comma -- should be inserted prior to the term "such".

Page 40, paragraph [00143], line 4: A -- comma -- should be inserted prior to the term "such".

Page 40, paragraph [00143], line 5: A -- comma -- should be inserted after the term "herein".

Page 40, paragraph [00144], line 23: A -- comma -- should be inserted prior to the term "such".

Page 41, paragraph [00145], line 21: A -- comma -- should be inserted after the numeral "810".

Page 41, paragraph [00145], line 22: A -- comma -- should be inserted after the numeral "831".

Page 41, paragraph [00145], line 31: The "period" after the numeral "814" should be replaced with a -- comma --.

Page 42, paragraph [00146], line 13: Should reference numeral "859A" be corrected to read -- 859 --?

Page 43, paragraph [00149], line 7: A -- comma -- should be inserted prior to the terms "such" and "disposed".

Page 43, paragraph [00150], line 1: The second occurrence of the article "the" should be deleted.

Page 43, paragraph [00150], line 9: The article -- a -- should be inserted prior to the term "calibration".

Page 44, paragraph [00151], line 4: A -- comma -- should be inserted prior to the term "but". Appropriate correction is required.

Claim Objections

9. Claims 21, 36-52, 61, and 64 are objected to because of the following informalities:

Re claim 21, claim line 1: A -- comma -- should be inserted prior to the term "comprising".

Re claim 21, claim line 5: The article -- a -- should be inserted prior to the second occurrence of the term "mobile".

Re claim 36, claim line 6: The article -- a -- should be inserted prior to the second occurrence of the term "mobile".

Re claim 61, claim line 1: A -- comma -- should be inserted prior to the term "further" in order to maintain consistency with previously similarly worded claims. Appropriate correction is required.

Allowable Subject Matter

10. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims because the prior art fails to teach and/or make obvious the following:

Claim 21: Providing a multi-column liquid chromatography data correction method, comprising the steps of: providing a plurality of liquid chromatography columns in fluid communication with a common mobile phase source, each column of the plurality of columns containing a stationary phase material, wherein the mobile phase source supplies mobile phase to the plurality of columns at a selected mobile phase source output flow rate; providing a detector in sensory communication with the plurality of columns; supplying a calibrant having at least a first component to each column of the plurality of columns; deriving for each column of the plurality of columns, at least one correction factor based on a first physical parameter; and applying, for each column of the plurality of columns, the at least one correction factor to the raw chromatographic data to yield corrected chromatographic output data in combination with all of the remaining limitations of the claim.

Claims 36-52: Providing a method for correcting retention times in multi-column liquid chromatography, the method comprising the steps of: providing a plurality of liquid chromatography columns in fluid communication with a common mobile phase source, each column of the plurality of columns containing a stationary phase material and having an associated detection region, wherein the mobile phase source supplies mobile phase to the plurality of columns at a selected mobile phase source output flow rate; providing, for the detection region associated with each column of the plurality of columns, a detector in sensory communication with the detection region; supplying a first calibrant to each column of the plurality of columns, wherein the first calibrant contains at least a first component and a second component, with each of the first component and second component having different retention characteristics relative to deriving, for each column of the plurality of columns, at least one correction factor based on at least one of a first time and the second time for the components to reach the detecting regions; and applying, for each column of the plurality of columns, the at least one correction factor to the raw chromatographic data to yield corrected chromatographic data with corrected retention times in combination with all of the remaining limitations of the claim.

Claims 53-63: Providing a system for correcting retention times in multi-column liquid chromatography, the system comprising: a plurality of detection regions associated with a plurality of separation columns; at least one detector in sensory communication with the plurality of detection regions; and a microprocessor for executing instructions to derive correction factors based on data obtained from the at

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least one detector, and to apply the correction factors to generate corrected chromatographic data with corrected retention times in combination with all of the remaining limitations of the claim.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art to US 4,357,668 (Schwartz et al.) discloses a base line correction method and apparatus for use with a liquid chromatography system.

The prior art to US 5,004,538 (Apfel) discloses a control arrangement for a liquid chromatograph which utilizes a correction factor to compensate for non-uniform passage of eluate past a detector of the chromatograph.

The prior art to US 5,600,134 (Ashe et al.) discloses a method for preparing blend products, whereby correction factors are generated to help correct retention times of the analysis instruments.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Larkin
AU 2856
12 June 2006



DANIEL S. LARKIN
PRIMARY EXAMINER